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Abstract

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Grant Number: 1F31NR007924-01
PI Name: CONSTANTIN, CAROLYN M.
PI Title:
Project Title: Antigen-specific memory CD8+ T-cells in pregnancy

Abstract: *This study will employ an experimental design to determine if the in viva generation of antigen-specific memory CDS+ T-cells in response to an acute viral infection is altered in pregnancy. Lymphocyticchoriomeningitis virus (LCMV) infection in mice will serve as the experimental model. Analysis will include comparing the frequencies of antigen-specific CD percent memory T-cells generated in mice infected with LCMV in early pregnancy (day 7 of gestation) with nonpregnant mice infected at the same time. Genetically identical S-10 week old female C57BL/6 mice will be randomly assigned to the experimental (N=50) and control (N=50) group. The experimental group will be impregnated, then both groups infected with LCMV (Armstrong strain) and allowed to clear the virus. Antigen-specific memory CD8+ T-cells will be enumerated by major histocompatibility complex (MHC) class I tetramer staining for the three immunodominant epitopes." Functional capability of the cells will be evaluated using intracellular cytokine (ICC) staining for the presence of interferon-gamma (IFNy) and tumor necrosis factor-alpha (TNF•) in response to stimulation with cognate peptide as well as plaque assays to assess clearance of the virus. This study will produce data to determine if there is a difference in the generation of antigen specific memory CD8+ T-cells to an acute viral infection in pregnant mice.*

Thesaurus Terms:
cellular immunity, immunologic memory, leukocyte activation /transformation, pregnancy immunology, pregnancy infection, suppressor T lymphocyte, viremia, virus disease MHC class I antigen, acute disease /disorder, cytokine, disease /disorder model, immunoregulation, interferon gamma, lymphocytic choriomeningitis virus, tumor necrosis

factor alpha
flow cytometry, immunocytochemistry, laboratory mouse, monoclonal antibody, plaque assay, transgenic animal

Institution:	EMORY UNIVERSITY ATLANTA, GA 30322
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